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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/527,752

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EXAMINER

VO, HAI

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/527,752	<b>Applicant(s)</b> SASAKI ET AL.	
	<b>Examiner</b> Hai Vo	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13, 15 and 17-23 is/are pending in the application.
- 4a) Of the above claim(s) 9-13, 15 and 19-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 17, 18, 22 and 23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

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1. The art rejections over JP'822 are maintained.
2. The 112 claim rejections have been overcome in view of the present amendment.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-8, 17, 18, and 22 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP 2002-209822. JP'822 discloses a porous film consisting of a polymetaphenylene isophthalamide, having micropores uniformly distributed in the entire surface of the porous film (paragraph 1, abstract). Likewise, there is little or no difference between one surface from another surface in the open areas and average pore size. The porous film has the open area of 10 to 70% on the film surface. The open area is intended to

be on two surfaces of the film in view of the uniform pore size in the entire surface of the porous film. In addition, the porous film is subjected to biaxial stretching to balance the open area and pore size distribution (paragraph 25). The porous film has a porosity of 40 to 90%. The porous film has an average pore size of 0.5 to 20 microns at the film surface (paragraph 5). The porous film is about 25  $\mu\text{m}$  thick (paragraph 4). The inorganic salt can be added with an amount from 0 to 50 wt% based on 100 wt% of the polymer (paragraph 13). Likewise, the presence of the inorganic salt is optional. JP'822 does not specifically disclose the heat of fusion, heat shrinkage, water permeability and gas permeability.

However, those properties would be inherently present because JP'822 uses the same material as Applicants to form a porous film which has porosity, open area ratio of two surfaces, an average pore size on the film surface within the claimed ranges. This is in line with *In re Spada*, 15 USPQ 2d 1655 (1990) which holds that products of identical chemical composition can not have mutually exclusive properties. It seems from the claim, if one meets the structure recited, the properties must be met or Applicant's claim is incomplete.

It has been held that a recitation with respect to the manner in which a claimed blank is intended to be employed does not differentiate the claimed porous film from a prior art cleaning sheet satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

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Accordingly, JP'822 anticipates or strongly suggests the claimed subject matter.

6. Claims 1-8, 17, 18, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohya et al (US 6,565,962) further in view of JP 2002-209822. Ohya discloses a polyimide porous film having a thickness of 50 microns and a porosity of 65% (example 1). The air side surface has a mean pore size of 0.48 microns and the substrate side surface has a mean pore size of 0.76 microns. Likewise, the porous film having a mean pore size on both surfaces within the claimed range. There is no teaching or suggestion that the porous film contains an inorganic salt. The porous film is homogeneous on both sides (column 1, lines 55-60; column 5, lines 15-20). Additionally, combination of the two conditions together (1) a polymer solution containing an amide solvent and polyethylene glycol and (2) temperature of the amide coagulating solution being between -20°C to +25°C is contemplated by the Ohya patent (column 4, lines 5-30; column 6, lines 10-15). It is respectfully submitted that the open area and difference in the open areas of the two surfaces would be inherently present. The same token is applied to water permeability, heat of fusion and heat shrinkage. Ohya does not specifically disclose the porous film made from poly(metaphenylene isophthalamide). JP'822 discloses a porous film made from a heat resistant poly(metaphenylene isophthalamide). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use

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poly(metaphenylene isophthalamide) for the porous film because poly(metaphenylene isophthalamide) and polyimide have been shown in the art to be recognized equivalent heat resistant polymers for porous films.

### ***Response to Arguments***

7. The art rejections over JP'822 have been maintained for the following reasons. Applicants argue that since JP'822 uses a different process to form the porous film, JP'822 fails to teach or suggest the difference of 1-40% in the open areas of two surfaces. The examiner respectfully disagrees. JP'822 discloses a porous film consisting of a polymetaphenylene isophthalamide, having micropores *uniformly distributed in the entire surface of the porous film* (paragraph 1, abstract). Likewise, there is little or no difference between one surface from another surface in the open area and average pore size. The porous film has the open area of 10 to 70% on the film surface. The open area is intended to be on two surfaces of the film in view of the uniform pore size in the entire surface of the porous film. The porous film has the uniform micropores with an average pore size ranging from 0.5 to 20 microns (paragraph 5). This is within the claimed range. In addition, Applicants made clear that by specifically controlling the processing conditions, the porous film having same property of the two surfaces in terms of the open areas, the mean pore size of both surfaces. Applicants further added that is the special

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feature of the present invention. However, the examiner notes that such a special feature is not presently claimed. Difference of the open areas of two surfaces could be up to 40%. Applicants' statements apparently appear to be in conflict with the significant difference in the open areas of two surfaces. Accordingly, the art rejections are sustained.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 2006/0121267 to Tsuyumoto et al disclose a porous film having an average surface pore size A of 0.01 to 10 microns and an average rate of surface hole area C and has an average inside pore size B and an average rate of inside hole area D wherein the ratio A/B is 0.3 to 3 and C/D is 0.7 to 1.5.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory

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period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (571) 272-1485. The examiner can normally be reached on Monday through Thursday, from 9:00 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hai Vo/



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Primary Examiner, Art Unit 1794